

REMARKS

1. The present amendment is in response to the final rejection mailed November 30, 2004. The following rejections were made:

- (1) claims 1, 5, 6, 10-17, 39, and 106 as anticipated by Jack et al.
- (2) claims 7-9, 81, 83-85 and 105 as obvious over Jack et al.
- (3) claims 1-85 and 94-108 as indefinite.

2. The office action concedes that claims 2-4, 18-38, 40-80, 82 94-104, 107 and 108 are free of prior art. Claim 2 recited the "method of claim 1, comprising the further steps of isolating the tag".¹ This limitation has been moved into main claim 1 (and claim 2 then cancelled as redundant). Consequently, the prior art rejections should be withdrawn. Conforming amendments were made to claims 24(v), 25(x), 26(viii), 27(x), 28(vii), 26(vi), 30(ix).

3. The indefiniteness rejection states

The claims are confusing because it cannot be determined what action(s) is required in the final step of independent claim 1, "obtaining at least one single stranded polynucleotide tag". Firstly, it is unclear what is encompassed by "obtaining"; this is, by what action one "obtains" said tag. Secondly, it is unclear what is encompassed by a "tag"; although this term is also used in the preamble, it cannot be determined from the claims as a whole what single stranded polynucleotide is to be "obtained",

¹ In the telephonic interview held March 28, Counsel and the Examiner agreed that the term "isolating the tag" was properly construed to mean that the tag was freed from the remaining fragment of the double stranded polynucleotide from which the tag was derived, i.e., it includes denaturation and subsequent separation. See Figures 7-9.

and is considered to be a "tag".
Clarification is required.

The rejection first questions whether nicking a double stranded polynucleotide is itself sufficient to obtain a single stranded nucleotide strand. In Fig. 7, double stranded polynucleotide I is nicked at site C. This generates a single stranded polynucleotide component which is hybridized to the remainder of II, but not covalently linked to it. In the next step, the tag is separated from III. The identity of the tag is clear in view of the definition.

Our position is that in claim 1, step (ii), even though the tag is not physically separated by the nicking, it is not covalently bound to anything else and hence may fairly be described as "obtained". Then, new step (iii) recites the actual isolation of the tag. Even if the Examiner disagrees, the step (iii) surely results in the tag being "obtained".

The examiner has also questioned what is encompassed by the term "tag". Clearly, it is a single stranded polynucleotide, see P48, L23-33 and Fig. 7.

3. We have further amended claim 1 in view of possible controversy over the meaning of "isolated". When there is a mixture of two substances X and Y, and X and Y are separated, it is possible to think of X as being isolated from Y or of Y as being isolated from X.

Jack nicked a blunt-ended double stranded polynucleotide with the goal of obtaining a double stranded polynucleotide with a cohesive end (a single stranded overhand). In the process, he generated a single stranded piece which Jack apparently discarded. For example, in Jack example 2, Jack nicked with N.BstNBI, dissociated the single stranded pieces with heat, and transferred the remaining double stranded molecule to a gel.

We wish to avoid any possibility that Jack could still be

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construed as anticipatory, i.e., by arguing that Jack inherently "obtained" and "isolated" a single stranded polynucleotide tag because he generated and dissociated that single stranded piece.

Hence, amended claim 1 recites (1) the tag is obtained "in a form suitable for further use of said tag", and (2) "retaining said tag for further use". The specification describes further use of the tag, see e.g., P117, L22-24, PP128-129, 143-147.

New claim 109 is based on prior claim 3, 4 and 40 (see also 43) and simply recites certain disclosed uses of the tag.

4. The specification has been amended to delete the definition of "ssDNA tag" at page 50, lines 23-24. In saying that an "ssDNA tag" "comprises" single stranded DNA (thereby allowing it to be double stranded), it is inconsistent with the definition of "ssDNA" at page 50, line 21, the definition of "single stranded polynucleotide tag" at P48, L28-33, the usage elsewhere in the specification, and the common meaning in the art.

5. Unelected claims 86-93 have been cancelled.

Respectfully submitted,

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